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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,845	01/29/2004	Sergio Kolor	030603	7600

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QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
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EXAMINER	
BRANDT, CHRISTOPHER M	
ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
12/24/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/768,845	KOLOR ET AL.	
	Examiner	Art Unit	
	CHRISTOPHER M. BRANDT	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 12, 2009 has been entered.

Response to Amendment

This Action is in response to applicant's amendment/arguments filed on October 12, 2009. **Claims 1-42** are now currently pending in the present application.

Response to Arguments

Applicant's arguments filed October 12, 2009 have been fully considered but they are not persuasive.

With regard to applicant's argument that Narasimhan fails to teach or suggest groups of transceiver being grouped together based upon a mutual data rate, the examiner respectfully disagrees. Narasimhan discloses as active antennas may have the same data rate (column 1 lines 34-41). The examiner agrees that it is well understood to those of skill in the art that the use of antenna diversity can increase the data rate for a single channel associated with a single transceiver, e.g. where the single transceiver is coupled to multiple antennae (column 2 lines 40-41). In addition, the examiner agrees that it is well under stood that antenna diversity is the use of multiple antennas for a single channel associated with a single transceiver. However,

Narasimhan also teaches that there are two transceivers (i.e. multiple transceivers), which have the same data rate (column 1 lines 34-41, column 2 lines 16-29).

As a result, the claims are written such that they read upon the cited references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-8, 10-13, 15, 17-20, 22-25, 27, 29, 30, 31, 33, 35-38, 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gopalakrishnan et al. (US PGPUB 2002/0183064 A1, hereinafter Gopalakrishnan)** in view of **Narasimhan (US Patent 7,505,788 B1)** in view of and further in view of **Ling et al. (US Patent 5,737,327, hereinafter Ling)**.

Consider **claims 1, 13 and 25 and 31**. Gopalakrishnan discloses a method for transmitting data in a code division multiple access (CDMA) communication network (abstract), comprising:

allocating a common Walsh code to a group of transceivers (page 1 and 2 paragraphs 0010- 0012 where Gopalakrishnan discloses allocating Walsh codes for signaling, protocol information and voice and data services);

allocating a respective, different long code to each transceiver in the group (page 1 and 2 paragraphs 0010- 0012 where Gopalakrishnan discloses allocating user specific long codes); and

time-multiplexing transmission of the data to the transceivers in the group by applying the common Walsh code and the respective long code of each transceiver to data packets directed to the transceivers so as to form multiplexed data packets, and transmitting the multiplexed data packets in sequence over the network to the group of transceivers (page 1 and 2 paragraphs 0010- 0012 where Gopalakrishnan discloses that the long code is combined with Walsh codes and transmitted to the mobile stations. The initial Walsh spreading is done to enable the BS to differentiate between the categories of data, and the subsequent long code spreading is done to differentiate between users).

Gopalakrishnan discloses the claimed invention but fails to explicitly teach that the group of transceivers being grouped together based upon a mutual data rate.

However, Narasimhan teaches that the group of transceivers being grouped together based upon a mutual data rate (column 1 lines 34-41, read as active antennas may have the same data rate).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Narasimhan into the invention of Gopalakrishnan in order to increase to capacity of the channels.

In addition, Gopalakrishnan and Narasimhan fail to explicitly teach the long code being specific to the transceiver in the group and enabling only the specific transceiver in the group to decode the data that was intended for said specific transceiver (The examiner notes that this is the general concept of long codes. Nonetheless, the examiner has provided applicants with the Narasimhan reference to disclose this feature).

However, Ling teaches the long code being specific to the transceiver in the group and enabling only the specific transceiver in the group to decode the data that was intended for said specific transceiver (column 5 lines 11-23, read as the PN code is unique to the mobile station 100, so that no other receiver in communication with the base station may decode the traffic channel transmitted to the mobile station).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Ling into the invention of Gopalakrishnan and Narasimhan in order to avoid eavesdropping or spoofing thus making the system more secure.

Consider **claims 7, 19, and 37**. Gopalakrishnan discloses a method for transmitting data in a code division multiple access (CDMA) communications network (abstract), comprising:

allocating a plurality of different Walsh codes to respective sets of transceivers (page 1, 2 and 4 paragraphs 0010- 0012 and 0040 where Gopalakrishnan discloses that different Walsh codes are allocated to mobile stations to distinguish the categories of data that is transmitted on the channel);

allocating a respective, different long code to each of the transceivers in the sets (page 1 and 2paragraphs 0010- 0012 where Gopalakrishnan discloses allocating user specific long codes; and

for each Walsh code, time-multiplexing transmission of the data to the transceivers in the respective set by applying the Walsh code and the respective long code of each transceiver of the respective set to data packets directed to the transceivers so as to form multiplexed data packets, and transmitting the multiplexed data packets in sequence over the network to the sets of transceivers (page 1 and 2 paragraphs 0010- 0012 where Gopalakrishnan discloses that the long code is combined with Walsh codes and transmitted to the mobile stations. The initial Walsh spreading is done to enable the BS to differentiate between the categories of data, and the subsequent long code spreading is done to differentiate between users).

Gopalakrishnan discloses the claimed invention but fails to explicitly teach that the group of transceivers being grouped together based upon a mutual data rate.

However, Narasimhan teaches that the group of transceivers being grouped together based upon a mutual data rate (column 1 lines 34-41, read as active antennas may have the same data rate).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Narasimhan into the invention of Gopalakrishnan in order to increase to capacity of the channels.

In addition, Gopalakrishnan and Narasimhan fail to explicitly teach the long code being specific to the transceiver in the group and enabling only the specific transceiver in the group to decode the data that was intended for said specific transceiver (The examiner notes that this is the general concept of long codes. Nonetheless, the examiner has provided applicants with the Narasimhan reference to disclose this feature).

However, Ling teaches the long code being specific to the transceiver in the group and enabling only the specific transceiver in the group to decode the data that was intended for said specific transceiver (column 5 lines 11-23, read as the PN code is unique to the mobile station 100, so that no other receiver in communication with the base station may decode the traffic channel transmitted to the mobile station).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Ling into the invention of Gopalakrishnan and Narasimhan in order to avoid eavesdropping or spoofing thus making the system more secure.

Consider **claims 3, 15, 27, and 33 and as applied to claims 1, 13, 25, and 31, respectively**. Gopalakrishnan disclose wherein the transceivers are wireless and comprise mobile transceivers in a cellular network (abstract, page 1 paragraph 0006).

Consider **claims 5, 17, 29, and 35 and as applied to claims l, 13, 25, and 31, respectively**. Gopalakrishnan discloses wherein the transceivers are configured to receive the

multiplexed data packets at a common data transfer rate (see page 1 paragraph 0005, page 3 paragraph 0024)

Consider **claims 6, 18 30, and 36 and as applied to claims l, 13, 25, and 31, respectively**. Gopalakrishnan discloses wherein the transceivers are adapted to communicate using one or more voice channels and one or more data channels, and wherein the common Walsh code defines one of the data channels (page 1, 2 and 4 paragraphs 0006, 0010- 0012 and 0040)

Consider **claims 8, 20, and 38 and as applied to claims 7, 19, and 37, respectively**. Gopalakrishnan discloses wherein allocating the plurality of different Walsh codes comprises measuring a voice-channel power used by a central transmitter for transmitting voice channels to the transceivers, and allocating and de-allocating at least one of the different Walsh codes in response to at least one of an excess power available to the central transmitter above the voice-channel power, an additional Walsh code available to the transmitter, and cell site modem resources available to the transmitter (see page 2 paragraph 0019 where Gopalakrishnan discloses the power budget for the uplink channel which is used for voice users).

Consider **claims 10, 22, and 40 and as applied to claims 7, 19, and 37, respectively**. Gopalakrishnan discloses assigning each set of transceivers to two or more groups of transceivers, and assigning each group to receive the data at a different respective data transfer rate (see page 4 paragraphs 0039-0041).

Consider **claims 11, 23, and 41 and as applied to claims 10, 22, and 40,respectively**. Gopalakrishnan discloses setting, for each group, the different transfer rate in response to a radio

receiving condition of the group at a central transceiver for the transceivers (see page 3 paragraphs 0026- 31, page 4 paragraphs 0039-0041).

Consider **claims 12, 24, and 42 and as applied to claims 10, 22, and 40, respectively**. Gopalakrishnan discloses re-allocating a specific transceiver comprised in a first group comprised in the two or more groups to a second group comprised in the two or more groups in response to radio conditions at the specific transceiver (see page 3 paragraphs 0034-0036).

Claims 2, 9, 14, 21, 26, 32, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over is **Gopalakrishnan (US PGPUB 2002/0183064 A1, hereinafter Gopalakrishnan A)** in view of **Narasimhan (US Patent 7,505,788 B1)** in view of **Ling et al. (US Patent 5,737,327, hereinafter Ling)** and further in view of **Gopalakrishnan (US Patent 7,009,949 B1, hereinafter Gopalakrishnan B)**.

Consider **claims 2, 14, 26, and 32 and as applied to claims l, 13, 25, and 31 respectively**. Gopalakrishnan A, Narasimhan, and Ling disclose that the transceivers in the group have respective data throughput rates, and wherein transmitting the multiplexed data packets comprises identifying a specific transceiver in the group among the data throughput rates of the transceivers in the group, and applying the respective long code to transmit at least one multiplexed data packet to the specific transceiver (see abstract page paragraph O026-O031).

However, Gopalakrishnan A, Narasimhan, and Ling fail to explicitly disclose identifying a specific transceiver in the group having a minimum data throughput rate.

In the related art Gopalakrishnan B discloses identifying a specific transceiver in the group having a minimum data throughput rate (abstract, column 2 lines 3-10, column 3 lines 22-46)

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Gopalakrishnan A, Narasimhan, and Ling with the teachings of Gopalakrishnan B to provide dynamic resource allocation

Consider **claims 9, 21, and 39 and as applied to claims 7, 19, and 37, respectively**. Gopalakrishnan A, Narasimhan, and Ling fail to specifically disclose assigning and de-assigning at least one of the different Walsh codes to a specific receiver comprised in the transceivers in response to a data call directed to the specific receiver.

In the related art Gopalakrishnan B discloses assigning and de-assigning at least one of the different Walsh codes to a specific receiver comprised in the transceivers in response to a data call directed to the specific receiver (see column 1 lines 39-65).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Gopalakrishnan A, Narasimhan, and Ling with the teachings of Gopalakrishnan B because of the nature of latency requirements of transmitting voice compared to transmitting data (transmitting voice requires dedicated whereas transmitting data does not).

Claims 4, 16, 28, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gopalakrishnan et al. (US PGPUB 2002/0183064 A1, hereinafter Gopalakrishnan)** in view of **Narasimhan (US Patent 7,505,788 B1)** in view of **Ling et al. (US Patent 5,737,327, hereinafter Ling)** and further in view of **Devon (US Patent 5,692,127)**.

Consider **claims 16, 28, and 34 and as applied to claims 13, 25, and 31, respectively**. Gopalakrishnan, Narasimhan, and Ling disclose the claimed invention but fail to explicitly teach

wherein the transceivers are wired and comprise landline transceivers in a communication network.

However, Devon teaches wherein the transceivers are wired and comprise landline transceivers in a communication network (column 3 lines 62-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Devon into the invention of Gopalakrishnan, Narasimhan, and Ling in order to further improve secure communication.

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098. The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Christopher M Brandt/

Examiner, Art Unit 2617

December 16, 2009

/George Eng/

Supervisory Patent Examiner, Art Unit 2617